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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,050	02/19/2004	Richard F. Gladney	SMCY-P03-098	5733
28120	7590	02/08/2005	EXAMINER	
FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			SANTOS, ROBERT G	
		ART UNIT	PAPER NUMBER	
		3673		

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	10/782,050	
Examiner	GLADNEY ET AL.	
Robert G. Santos	Art Unit 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 2/19, 5/20, 6/16, 6/17 and 8/30/2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-32 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/20/04, 6/16/04, 6/17/04 & 8/30/04
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-6, 9 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715. With regards to claims 1, 2, 4-6, 9, 25 and 26, Collom '658 is considered to show all of the limitations as recited in these claims except for a condition wherein each coil spring comprises four or more active coils and at least two twisted wire strands formed from the same material. Buckley '715 provides the basic teaching of a coil spring comprising four or more active coils and at least two twisted wire strands formed from the same material (see page 1, lines 35-43). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658 with a plurality of coil springs each comprising at four or more active coils and at least two twisted wire strands formed from the same material so "that they will possess greater elasticity and durability, and will be far more reliable and exact in their working than single springs are" (see Buckley '715, page 1, lines 30-34). With further regards to claim 1, although Collom '658 as modified by Buckley '715 does not specifically disclose a condition wherein each spring has a free length of at least about four inches, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the coil spring assembly of Collom '658 as modified

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by Buckley '715 with a plurality of springs each having a free length of at least about four inches since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. As concerns claim 27, Buckley '715 further teaches a condition wherein the first and second active coils each have an outside diameter larger than at least one of the active coils located intermediate to the first and second active coils (see Figure 7); the skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658 with a plurality of springs each having first and second active coils with an outside diameter larger than at least one of the active coils located intermediate to the first and second active coils since this type of spring configuration is well known in the art as taught by Buckley '715.

3. Claims 1-12, 22-24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhinelander '475. Rhinelander '475 is considered to disclose all of the limitations as claimed (note especially Figures 1-3; column 1, lines 29-47; and column 2, lines 3-22) except for a condition wherein each spring has a free length of at least about four inches. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the coil spring assembly of Rhinelander '475 with a plurality of springs each having a free length of at least about four inches since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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4. Claims 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and further in view of Sitton '097, or alternatively, Rhinelander '475 in view of Sitton '097. Collom '658 as modified by Buckley '715, or alternatively, Rhinelander '475 does not specifically disclose a condition wherein the stranded wires are provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating. Sitton '097 provides the basic teaching of a coil spring (W) provided with a coating formed from an epoxy plastic compound. The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658 as modified by Buckley '715, or alternatively, to provide the coil spring assembly of Rhinelander '475 with stranded wires provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating in order to provide coil springs which are corrosion-resistant, thereby extending the service life of the mattress assembly.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and further in view of Donnelly et al. '681, or alternatively, Rhinelander '475 in view of Donnelly et al. '681. Collom '658, as modified by Buckley '715, or alternatively, Rhinelander '475 do not specifically disclose a condition wherein at least one of the plurality of strands includes an anodizing surface treatment. Donnelly et al. '681 provide the basic teaching of applying an anodizing surface treatment to metal (as described in column 2, lines 23-35 and in column 3, lines 20-40). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715, or alternatively, to provide the coil spring assembly of Rhinelander '475 with at least one of the

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plurality of strands including an anodizing surface treatment in order to render the coil spring assembly “substantially less susceptible to corrosion, delamination and other environmentally and stress-induced failures” (see Donnelly et al. '681, column 1, lines 6-15).

6. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhinelander in view of French '869. Rhinelander '475 does not specifically disclose a condition wherein the plurality of strands is fastened together at least at one end and at a plurality of locations along the multi-strand cord. French '869 provides the basic teaching of a spring “welded together at one or both ends.” The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Rhinelander '475 with springs each having a plurality of strands is fastened together at least at one end and at a plurality of locations along the multi-strand cord in order to make the springs “more powerful and durable”, thereby extending the service life of the coil spring assembly (see French '869, page 1, lines 62-67).

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and further in view of Sim '344. Collom '658, as modified by Buckley '715, does not specifically disclose a condition wherein the plurality of strands is fastened together at a plurality of locations along the multi-strand cord. Sim '344 provides the basic teaching of a coil spring assembly comprising a plurality of springs (e) each having a number of strands “bound together at intervals by metal binders (i)” (see Sim '344, page 1, lines 26-28). The skilled artisan would have found it obvious at the time the invention was made to provide

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the coil spring assembly of Collom '658, as modified by Buckley '715, with a plurality of strands fastened together at a plurality of locations along the multi-strand cord in order to strengthen the structural integrity of each spring, thereby extending the service life of the coil spring assembly.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and further in view of Marshall '160. Collom '658, as modified by Buckley '715, does not specifically disclose the use of an encasing material formed around the first helical spring. Marshall '160 provides the basic teaching of a mattress core (G) comprising a plurality of coils (D) each enclosed within a pocket (E). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658, as modified by Buckley '715, with an encasing material formed around the first helical spring in order to reduce noise produced by compression of the coil springs when a user is positioned on the mattress assembly, thereby helping to provide enhanced user comfort.

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and further in view of Codos '383. Collom '658, as modified by Buckley '715, does not specifically disclose a condition wherein a pitch between first and second ones of the active coils is different from a pitch between second and third ones of the active coils. Codos '383 provides the basic teaching of a mattress assembly (10) comprising coil springs of varying spring rates. The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658, as modified by Buckley '715 with a plurality of springs wherein a pitch between first and second ones of the active coils of each spring is

different from a pitch between second and third ones of the active coils in order to create a mattress that includes different firmness zones, thereby providing greater specialized user support as desired.

10. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and further in view of Summers '751. Collom '658, as modified by Buckley '715, does not specifically disclose the use of a second helical spring located concentrically inside and attached to the first helical spring. Summers '751 provides the basic teaching of a coil spring assembly comprising a plurality of second helical springs (2) located concentrically inside and attached to a plurality of first helical springs (1). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715, with the use of a second helical spring located concentrically inside and attached to the first helical spring in order to provide additional support to a user positioned thereon, thereby helping to ensure enhanced user comfort.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gladney et al. '354, Gladney '930 and Gladney '929.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert G. Santos whose telephone number is (703) 308-7469. The examiner can normally be reached on Tues-Fr and first Mondays, 10:30 a.m. to 8:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (703) 308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert G. Santos  
Primary Examiner  
Art Unit 3673

R.S.  
February 4, 2005